

Notice of Allowability

Application No.

10/519,481

Examiner

BRANDON J. MILLER

Applicant(s)

VIERO ET AL.

Art Unit

2617

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/5/2010.
2. ☒ The allowed claim(s) is/are 1,2,4-18,20-35 and 38-64.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Brandon J Miller/
Examiner, Art Unit 2617

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

DETAILED ACTION

Allowable Subject Matter

- I. The following is an examiner's statement of reasons for allowance:

Claim 1 recites a method with steps as recited in the specification (pages 3-16) including first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; second determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes, wherein the circuit arrangement is at least substantially in accordance with a combined tree structure comprising at least one first tree branch configured to perform transmitter tasks and at least one second tree branch configured to receive receiver tasks, and wherein the circuit arrangement comprises one or more nodes of different branches is-connected in a predetermined manner.

The prior art teaches a method for determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes.

However, applicant's independent claim 1 comprises a method with a particular combination of steps, as recited above, which includes first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes, wherein the circuit arrangement is at least substantially in accordance with a combined tree

structure comprising at least one first tree branch configured to perform transmitter tasks and at least one second tree branch configured to receive receiver tasks, and wherein the circuit arrangement comprises one or more nodes of different branches is-connected in a predetermined manner.

This is neither taught nor suggested by the prior art.

Claims 5-17 are allowable based on their dependence on independent claim 1.

Claim 2 recites a method with steps as recited in the specification (pages 3-16) including first determining for different circuit arrangement nodes at least one operation to execute and selecting a modification level from the circuit arrangement; merging together nodes in the selected modification level and deleting irrelevant nodes and links between the nodes and/or adding new links; second determining one or more division criteria for dividing the signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes; and executing the determined operations in the circuit arrangement nodes according to the signal classes.

The prior art teaches a method for determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes.

However, applicant's independent claim 2 comprises a method with a particular combination of steps, as recited above, which includes first determining for different circuit arrangement nodes at least one operation to execute and selecting a modification level from the circuit arrangement; merging together nodes in the selected modification level and deleting

irrelevant nodes and links between the nodes and/or adding new links; and executing the determined operations in the circuit arrangement nodes according to the signal classes.

This is neither taught nor suggested by the prior art.

Claim 4 recites a method with steps as recited in the specification (pages 3-16) including first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; second determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes, wherein the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the centralized loop, wherein at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

The prior art teaches a method for determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes.

However, applicant's independent claim 4 comprises a method with a particular combination of steps, as recited above, which includes first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes,

wherein the circuit arrangement is at least substantially in accordance with a centralized loop such that at least two subtrees are connected to the centralized loop, wherein at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

This is neither taught nor suggested by the prior art.

Claims 38-50 are allowable based on their dependence of independent claim 4.

Claim 18 recites an apparatus with elements as defined in the specification (pages 3-16) including nodes arranged to perform at least one operation; a divider configured to divide one or more signals or signal components according to one or more predetermined division criteria into signal classes; and performing circuitry configured to perform predetermined operations according to the signal classes, wherein the apparatus is configured substantially in a combined tree structure comprising, at least one first tree branch configured to perform transmitter tasks and at least one second tree branch configured to receive receiver tasks, and wherein the combined tree structure comprises one or more nodes of different branches connected in a predetermined manner.

The prior art teaches an apparatus comprising a divider for dividing one or more signals or signal components according to one or more predetermined division criteria into signal classes.

However, applicant's independent claim 18 comprises an apparatus with a particular structure, as recited above, which includes nodes arranged to perform at least one operation; and

performing circuitry configured to perform predetermined operations according to the signal classes, wherein the apparatus is configured substantially in a combined tree structure comprising, at least one first tree branch configured to perform transmitter tasks and at least one second tree branch configured to receive receiver tasks, and wherein the combined tree structure comprises one or more nodes of different branches connected in a predetermined manner.

This is neither taught nor suggested by the prior art.

Claims 21-34 are allowable based on their dependence of independent claim 18.

Claim 20 recites an apparatus with elements as defined in the specification (pages 3-16) including nodes arranged to perform at least one operation; a divider configured to divide one or more signals or signal components according to one or more predetermined division criteria into signal classes; and performing circuitry configured to perform predetermined operations according to the signal classes, wherein the apparatus is configured substantially in a centralized loop such that at least two subtrees are connected to the centralized loop, wherein at least one first subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

The prior art teaches an apparatus comprising a divider for dividing one or more signals or signal components according to one or more predetermined division criteria into signal classes.

However, applicant's independent claim 18 comprises an apparatus with a particular structure, as recited above, which includes nodes arranged to perform at least one operation; and

performing circuitry configured to perform predetermined operations according to the signal classes, wherein the apparatus is configured substantially in a centralized loop such that at least two subtrees are connected to the centralized loop, wherein at least one first subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

This is neither taught nor suggested by the prior art.

Claims 51-64 are allowable based on their dependence of independent claim 20.

Claim 35 recites a computer program embodied on a computer readable storage medium, the computer readable storage medium storing code comprising computer instructions, the computer readable storage medium being non-transitory and comprising computer instructions as recited in the specification (pages 3-16) including first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; second determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria for the signal classes; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes, wherein the circuit arrangement is at least substantially in accordance with either a combined tree structure comprising at least one tree branch configured to perform transmitter tasks and at least one second tree branch configured to perform receiver tasks, and wherein the circuit arrangement comprises one or more nodes of different branches connected in a predetermined manner; or a centralized loop such that at least two subtrees are

connected to the centralized loop, wherein at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

The prior art teaches computer instructions including determining one or more division criteria for dividing signals or signal components into signal classes; dividing at least one of the signals or signal components according to the one or more division criteria into the signal classes.

However, applicant's independent claim 35 comprises code comprising a particular combination of instructions, as recited above, which includes first determining for different nodes of a circuit arrangement one or more predetermined operations to execute; and executing the predetermined operations in the circuit arrangement nodes according to the signal classes, wherein the circuit arrangement is at least substantially in accordance with either a combined tree structure comprising at least one tree branch configured to perform transmitter tasks and at least one second tree branch configured to perform receiver tasks, and wherein the circuit arrangement comprises one or more nodes of different branches connected in a predetermined manner; or a centralized loop such that at least two subtrees are connected to the centralized loop, wherein at least one subtree performs tasks of radio-frequency parts and at least one second subtree performs tasks of baseband parts.

This is neither taught nor suggested by the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

II. The prior art made of record is considered pertinent to applicant's disclosure.

Haneda Pub. No.: US 2002/0167914 A1 discloses a node detecting method, node detecting apparatus and node detecting program.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON J. MILLER whose telephone number is (571)272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Brandon J Miller/
Examiner, Art Unit 2617

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